

CLAIMS:

1 1. Head restraint positioning mechanism (1) for the positioning
2 of a head restraint (2) of a vehicle seat (33) particularly in case of a rear-end impact
3 to the vehicle with at least

4 - an impact device (6) that has a dynamic connection to the head
5 restraint and that is essentially arranged on a seat back (9) of the
6 vehicle seat in the area of a pelvis (7) of a passenger (8) sitting on the
7 vehicle seat (3);

8 characterised in that
9 the impact device (6) presents at least one constructional unit (10) with
10 pressure-induced length variation and in that a corresponding length
11 variation of the impact device (6) is convertible into a positioning of the head
12 restraint (2) through the dynamic connection with the head restraint.

1 2. Head restraint positioning device according to Claim 1,
2 characterised in that the dynamic connection between the impact device (6) and head
3 restraint (2) presents at least one guide sleeve (3) for a head restraint rod (4).

1 3. Head restraint positioning device according to Claim 1 or 2,
2 characterised in that the dynamic connection between the impact device (6) and head
3 restraint (2) presents at least one holding device (5) particularly for a guide sleeve
4 (3).

1 4. Head restraint positioning device according to one of the
2 previous Claims, characterised in that a connection element (11), particularly bar-
3 shaped, is arranged between the impact device (6) and holding device (5).

1 5. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the constructional unit (10) is formed as an
3 impact panel (12) with a curvature, particularly convex in the direction of the
4 passenger (8).

1 6. Head restraint positioning device according to Claim 5,
2 characterised in that the impact panel (12) is formed with decreasing width (13) in
3 the direction of the connection element (11).

1 7. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the impact panel (12) presents a connection
3 device (15) for the pivoting connection to the connection element (11) at least on its
4 upper end (14).

1 8. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the connection element (11) is formed as a flat
3 profile.

1 9. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the connection element (11) presents pivoting
3 connection devices (19) on its upper and/or lower end (17, 18) for mounting,
4 particularly detachable, to the connecting device (15) of the impact panel (12) and
5 to the end (20) of the holding device (5) pointing to the connection element (11).

1 10. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the pivoting connection device (19) is formed
3 by clip connection elements (21).

1 11. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the clip connection element (21) presents at
3 least one bearing shell (22, 23, 24) formed with an essentially semi-circular cross-
4 section.

1 12. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the connection element (11) presents a
3 number of bore holes (25), particularly running diagonally to its length (39).

1 13. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the impact device (6) is held on its lower end
3 (26) on a pivot shaft (27) for a pivoting connection.

1 14. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the holding device (5) presents at least one
3 sleeve retainer (28, 29) for retention, particularly anti-twisting, of the guide sleeve
4 (3).

1 15. Head restraint positioning device according to one of the
2 previous Claims, characterised in that two sleeve retainers (28, 29) are essentially
3 arranged on the side ends (30, 31) of the holding device (5).

1 16. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the guide sleeve (3) is put into the sleeve
3 retainer (28, 29) and is held there either in a frictionally engaged, non-positive or
4 interlocking manner.

1 17. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the guide sleeve (3) and sleeve retainer (28,
3 29) present an anti-twisting cross-section.

1 18. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the guide sleeve (3) can be locked or clipped
3 with or in the sleeve retainer (28, 29).

1 19. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the guide sleeve (3) is formed for the sliding
3 support of the head restraint rod (4).

1 20. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the head restraint positioning device (1) is
3 mounted on the frame (32) of the vehicle seat (33), particularly in a detachable way.

1 21. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the head restraint positioning device is
3 mounted on a supporting device (34) that can be mounted to the frame (32) of the
4 vehicle seat (33), particularly in a detachable way.

1 22. Head restraint positioning device according to one of the
2 previous Claims, characterised in that a link guide (35) is formed between the guide
3 sleeve (3) and vehicle seat (33).

1 23. Head restraint positioning device according to Claim 20,
2 characterised in that at least one guide element (36) sticks out from the guide sleeve
3 (3) as a link guide, which guide element (36) engages with a corresponding guide
4 on the vehicle seat (33) and particularly on its frame (32).

1 24. Head restraint positioning device according to one of the
2 previous Claims, characterised in that on the frame (32) of the vehicle seat (33), a
3 retaining sleeve (37) is arranged for at least partial retention of the guide sleeve (3),
4 whereby the link guide (35) is formed between the retaining sleeve (37) and the
5 guide sleeve (3).

1 25. Head restraint positioning device according to one of the
2 previous Claims, characterised in that at least the constructional unit (10), with
3 pressure-induced length variation, of the impact device (6) is formed from an
4 elastically workable material.

1 26. Head restraint positioning device according to one of the
2 previous Claims, characterised in that the impact device (6) presents a clip-on shaft
3 (38) on its upper end (14) for the lower end (18) of the connection element (11).